WHAT IS CLAIMED IS:

1. An apparatus for encoding a transport stream, the apparatus comprising:

a non-realtime content source for providing non-realtime content;

a non-realtime encoder for encoding the non-realtime content into encoded non-realtime content;

a realtime content source for providing realtime video and audio content;

a realtime encoder for encoding the realtime video and audio content into encoded realtime video and audio;

a remultiplexer for repacketizing the encoded non-realtime content and the encoded realtime video and audio into transport packets; and

a re-timestamp unit coupled to the remultiplexer for providing timestamps to be applied to the transport packets in order to synchronize the realtime and non-realtime content therein.

2. The apparatus of claim 1, where the apparatus is within a head-end of a cable distribution system.

3. The apparatus of claim 1, further comprising:

a common clock unit for providing a common clock signal to the re-timestamping unit and for generating a clock stream to be transmitted along with the transport stream to set-top terminals.

4. The apparatus of claim 1, further comprising:

a rate control unit for determining an encoding rate for the non-realtime content and for providing the encoding rate for the non-realtime content to the non-realtime encoder.

5. The apparatus of claim 4, where the rate control unit predetermines said encoding rate for the non-realtime content according to an output rate of a final transport stream which includes both the realtime and non-realtime content.

6. The apparatus of claim 4, where the rate control unit predetermines an encoding rate for the realtime content according to an output rate of a final transport stream which includes both the realtime and non-realtime content.

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